

BLACK HILLS NATIONAL FOREST

MONITORING AND EVALUATION REPORT

FOR

FISCAL YEAR 1999

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Black Hills Forest Plan
Monitoring and Evaluation Report
Fiscal Year 1999
(October 1998 through September 1999)

What This Document Is:

This is the annual monitoring and evaluation report for the Black Hills Land and Resource Management Plan (Forest Plan.) A revision of the Forest Plan was completed in June 1997. There have been no subsequent amendments.

The basis for the annual monitoring report is in chapter four of the Forest Plan. This report does not discuss all of the inventory and monitoring which occurs in the Black Hills, but only monitoring information related to the Forest Plan. More detailed studies may occur in association with individual projects that implement the Forest Plan. When relevant to Forest-wide trends, information from these site-specific projects is incorporated into Forest-wide monitoring.

There are several different environmental factors monitored each year, but not every item is scheduled for evaluation and reporting on an annual basis. Chapter four of the Forest Plan indicates how often each item is reported. Since Fiscal Year 1999 is the second full year of implementation under the newly revised Plan, this report contains only those items intended for reporting on an annual or biannual basis.

There are three major purposes for Forest Plan monitoring: checking its implementation, assessing its effectiveness, and validation of the assumptions used in its development.

The implementation of the Forest Plan is discussed in the appendix of this Report. The goals and objectives of the 1997 Revised Forest Plan are listed along with accomplishments in Fiscal Year 1999 (FY 1999). A review of compliance with standards and guidelines is also discussed in the appendix.

For those items reported on an annual or biannual basis, this report provides an initial look for some environmental factors regarding the effectiveness of the Forest Plan and the validation of its assumption.

Supporting documentation for this report is located in the Supervisor's Office, Black Hills National Forest.

Major Conclusions:

This is the second reporting year for monitoring information under the newly revised Forest Plan. At this point, no conclusions can be drawn from much of the data.

Upcoming Plan Amendments/Revisions:

In 2000, work will begin on a Forest Plan amendment in accordance with an October 12, 1999 appeal decision by the Chief on the 1997 Revised Forest Plan. As this monitoring report was being prepared, specific details about the amendment process were still being finalized.

When available, information will be posted on the Black Hills National Forest website at www.fs.fed.us/r2/blackhills.

/s/ John C. Twiss
JOHN C. TWISS
Forest Supervisor

July 18, 2000
Date

Monitoring Item 1: Air Quality

The Black Hills National Forest continued to provide representation at the quarterly Pennington County Air Quality Board meetings during 1999.

The Forest experienced no violations of the Clean Air Act on the Black Hills National Forest for the period FY1998 through FY1999; nor was there any air quality complaints from individuals or other entities attributed to National Forest project activities (South Dakota - Administrative Rules - Article 34:10; Wyoming - Environmental Quality - Chapter 9.1).

Prescribed burning, including burning of forest residue piles on the Black Hills National Forest, remains the single greatest potential air degradation activity. The Forest increased its prescribed burning activities in 1999 to 1830 acres. The revised Forest Plan establishes an annual objective of 8000 acres of this type of activity. Increased prescribed burning activity is likely to be offset by a reduction in the amount of other types of burning that occur including wildfire and forest residue disposal.

The following mitigation actions are implemented on the Black Hills National Forest during prescribed burning activities to minimize air quality degradation:

- 1) Receptors such as subdivisions, roads, towns and other air-quality sensitive areas are identified during the prescribed burning planning process.
- 2) Burning prescriptions are identified in the "prescribed burn plan" to ensure that the air quality standards are maintained in receptor areas.
- 3) Prior to implementation of an approved prescribed burn project, weather conditions (predicted and current) including smoke dispersal predictions, are assessed to insure that smoke management criteria can be met.
- 4) Air quality is monitored on site and at receptor areas during burn implementation to insure that air quality remains within identified parameters.

The Black Hills region has no non-attainment areas identified at this time. Rapid City, South Dakota remains the key area of concern in that it is close to being designated as a non-attainment area for PM-10 which is a pollutant often produced by smoke and dust. The concern for air quality in the Rapid City area has resulted in the Forest working out guidelines jointly with the Rapid City Air Quality Office for all National Forest burning activities. This 1995 guideline places more restrictive measures for all forms of open burning planned on National Forest land in the Rapid City air shed. The Forest continues to work with the Pennington County Air Quality Office in mitigating all potential air-quality-impacting activities.

The State of South Dakota is currently developing a long range Air Quality Monitoring Data Base that will assimilate air-monitoring data, air quality influencing events and weather data from 1990 to the present. The Forest will be assisting the State by providing information on the occurrence of wildfires and prescribed fire activities on the Forest over that period. In addition to activities on the National Forest, information from other area land management agencies including the Bureau of Land Management, Fish and Wildlife Service Bureau of Indian Affairs and South Dakota State will be entered in the database. Air monitoring data will come from the 3 area monitoring sites currently established at Rapid City, the Badlands and Pine Ridge. This database once established will represent a comprehensive resource available to land management agencies in monitoring air quality trends and in determining air quality links with various resource management activities and or weather phenomena. The State currently has an intern working on updating the database and hopes to have 1999 information compiled and input in the near future.

Monitoring Item 9: Vegetative Diversity – Snag Retention

The Forest Plan Monitoring Implementation Guide calls for establishing permanent snag transects across the Forest. However, it is more efficient and more meaningful to tie snag density estimates to timber sales since these areas generally are susceptible to fuelwood harvest. The data for this report comes from Environmental Assessments prepared by Districts for timber sales.

Forest Plan Standard 2301 calls for an average of 1.08 hard snags at least 10 inches diameter at breast height, and 15 feet tall in conifer forest habitat. Snag density estimates for 5 project areas are presented in the following table. Based on this information several areas of the Forest have a hard snag deficiency. The three Districts reporting more than one Project Area had at least two that do not meet the standard. Snag densities are influenced by two principal factors: proximity to a population center and vehicular access. Many people prefer to cut standing snags for fuelwood. Unfortunately, the best firewood snags also are prime habitat for cavity dependent wildlife such as woodpeckers. Obligate cavity nester populations can be suppressed in areas without sufficient snags well distributed across the landscape.

The Forest currently has a temporary prohibition on cutting standing dead trees (snags) to protect cavity dependant species habitat until the snag standards in the Forest Plan can be reevaluated. Mitigation is included in Environmental Assessment Decision Notices for areas with low snag numbers. Typically these consist of leaving sufficient live tree replacements for future snags, road closures which reduce the likelihood of harvest for fuelwood, marking snags with either leave-tree paint or signs to prohibit cutting and/or closing areas to fuelwood harvest. All of these mitigation measures should serve to increase snag numbers through time; however, it will be several years before the influence is detectable. Because of these low numbers, it may be necessary for the Forest to consider additional mitigation measures to bring snag levels up to the required standard.

PROJECT AREA	DISTRICT	HARD SNAG DENSITY (SNAGS PER ACRE)
Canyon/Nest: Canyon Nest	Custer/Elk Mountain	0.97 0.85
Fossil	Custer/Elk Mountain	1.39
Lakes	Pactola/Harney	0.39-1.80
Mercedes	Pactola/Harney	0.98
Research/Rochford/Peak	Spearfish/Nemo	1.10

Monitoring Item 11: Down/Dead Woody Material

Objective 212 (Forest Plan, page I-12). In conifer forested portions of a planning unit, *provide at least once during a rotation (approx. 100 yrs.) an average of 5- to 10-tons per acre of down, dead woody material at least 3" in dia., provided there is no conflict with fire or pest management objectives.* In the shelterwood silvicultural system, accomplish this through commercial and precommercial treatments. Provide this tonnage no later than the removal cut (overstory removal) or a combination of removal cut and precommercial thinning of the established stand (thinning to be accomplished within 10 years of the removal cut).

Realize that the following active sales were planned under the 1983 Forest Plan and coarse woody debris objectives were not included in that earlier Plan. Review of these timber sales was to find out what was out there following harvest, and to monitor based on the 1997 Forest Plan monitoring requirements.

The sampled units were randomly selected. Ten 100-foot transects were sampled. The end of each transect was the starting point of the next transect. A random starting point direction was used for each of the transects. Sound logs 3" and greater (created by timber activities and resulting from natural drop) were recorded along the transects. The information collected was compared to the chart provided by Russ Graham to get an estimate of down woody material per acre.

Down Woody Material Estimate

District	Sale	Unit	Ton/Acre
Bearlodge	Baldman	1	12.5
Bearlodge	Cliff	8	5.2
Bearlodge	Cliff	12	4.8
Bearlodge	Rednose	6	2.2
Bearlodge	Rednose	18	12.5
Custer/Elk Mountain	Commanche	1	4.0
Custer/Elk Mountain	Commanche	3	6.3
Custer/Elk Mountain	Commanche	4	6.4
Custer/Elk Mountain	Garsong	1	3.2
Custer/Elk Mountain	Garsong	2	5.0
Custer/Elk Mountain	Pleasant	4	6.0
Custer/Elk Mountain	Pleasant	17	6.3
Pactola/Harney	Reno	6	6.0
Pactola/Harney	Reno	22	4.0
Spearfish/Nemo	Hellsgate	7	9.8

Monitoring Item 13: Regeneration

Surveys for natural regeneration were done on 21,352 acres in FY 1999. Out of the total acres surveyed, 8,700 acres were certified for regeneration. The remaining 12,652 acres will be surveyed next year to determine certification.

Surveys (first-year, third-year and fifth-year) are conducted before certification is established; certification may be established at any point in the three surveys that regeneration is verified.

Monitoring Item 14: Timber Production

The Black Hills National Forest timber offer in FY 1999 was 160,756 ccf. This includes sawtimber (regular program and salvage sales), products other than logs (POL), small commercial sales and personal use permits (firewood).

The Black Hills National Forest timber harvest volume in FY 1999 was 138,687 ccf of sawtimber and 963 ccf of products other than logs, for a total of 139,650 ccf.

The allowable sale quantity in the Forest Plan is based on the total during the decade from fiscal year 1997 to fiscal year 2006. (Record of Decision, page ROD-35). The 10-year allowable sale quantity expressed on an average annual basis:

	Million Cubic Feet (MMCF)	Hundred Cubic Feet (ccf)
Sawtimber	18.1	181,000
POL	2.1	21,000
Total ASQ	20.2	202,000

The following table compares the total acres for both 1998 and 1999 project decisions with the estimates for the decade as shown in the 1996 Final Environmental Impact Statement.

	DECADE TOTAL ACRES From Alt.G in the FEIS (page II-36)	HARVEST ACRES (SIGNED DECISIONS)	
		FY1998	FY1999
TOTAL	255,000	47,710	32,773

Note: Management direction was to accelerate project decisions to have a choice of available timber sale offerings.

Monitoring Item 17: Forage Utilization

The following information reflects Forest progress toward implementing and validating Forest Plan Goal 301 relative to annual projected livestock forage use, and Guidelines 2505 and 2506 relative to livestock grazing use of Forest rangeland (including riparian areas) during Fiscal Year 1999.

Developed AMPs and attendant Annual Operating Instructions (AOI) are the primary means of implementing and evaluating Forest Plan direction for rangeland management on the Black Hills National Forest. Forest AMPs include site-specific monitoring plans and schedules developed to evaluate grazing effects against prescribed management objectives over the planning horizon of the Forest Plan.

During FY 1999, actual grazing use on the Forest was 118,452 AUMs (approximately 93 percent of the annual projected Forest grazing capacity of 128,000 AUMs available for livestock utilization identified in the Forest Plan). Forage utilization relative to livestock grazing was monitored and evaluated on approximately 40,000 acres of suitable rangeland. This assessment represents approximately four percent of the suitable acres available for livestock grazing Forest-wide. Following, is a breakdown of acres and grazing allotments monitored by Ranger District:

ITEMS MONITORED	CUSTER/ ELK MTN	HARNEY/ PACTOLA	SPEARFISH/ NEMO	BEARLODGE
Acres Monitored and Evaluated for Livestock Forage Utilization	12,000	12,000	10,000	6,000
Grazing allotments Evaluated	6	9	6	6

Forage utilization data was obtained through on-site evaluation of forage use on portions of 27 grazing allotments Forest-wide. Methodologies for gathering data included ocular estimation and direct measurements generated through located sampling points and transects. Estimations of forage utilization over assessed portions of the allotments were obtained through extrapolation by estimating utilization on unmeasured areas based on measurements from the sampled areas. Livestock forage utilization was evaluated by comparing estimated forage use with allowable use guidelines incorporated in the Forest Plan and proper use guidelines incorporated in Allotment Management Plans (AMPs) for the allotments of interest. Following are findings and conclusions relevant to the evaluation:

1. While forage availability and resultant use may vary annually dependent on climatic conditions, actual livestock forage use occurring in FY 1999 fell within projected forage availability documented in the Forest Plan.

2. Measured forage utilization exceeded proper allowable use guidelines on some areas within the allotments monitored. When this occurs cattle are typically moved to the next pasture in the rotation cycle, and salt and mineral blocks are moved to attract the cattle to available forage. However, this use represented a small percentage of the overall livestock use throughout the allotments monitored. In all cases, forage utilization occurring throughout the allotments monitored was determined to fall within Forest Plan utilization standards and allotment management objectives.

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3. Investigation of forage utilization on the allotments sampled revealed a need for the Forest to step-up efforts toward fostering cooperative monitoring among grazing permittees. Again, the Forest has attempted to address this need in the permittee monitoring guide.

4. Forage utilization methods applied in FY 1999 investigated short-term use. These assessments did not evaluate actual use with Goals and Objectives of long-term management.

Monitoring Item 20

Sub-Item 20a: Pine Beetle Susceptibility

Stands in the Black Hills can be hazard rated for mountain pine beetle. The most current and well-tested system is based on Schmid et al. 1994. In this system, each stand is rated based on average diameter and stand density. Stands that have an average diameter of less than 7.0 inches are rated as low hazard. Stands that have an average diameter of greater than 7.0 inches are then broken down based on density. Low hazard stands have a density of less than 80 square feet of basal area per acre, moderate hazard stands have between 80 and 120 square feet of basal area per acre, and high hazard stands have a density of more than 120 square feet of basal area per acre.

All forest-wide stands are rated using data from the RMRIS database.

	1995 Acres	Percent of Total Forest Acres	1999 Acres	Percent of Total Forest Acres
Total Forest Acres	1,056,000	100%	1,043,898	100%
Acres Rated Low Hazard	621,000	59%	590,841	57%
Acres Rated Moderate Hazard	277,000	26%	347,117	34%
Acres Rated High Hazard	158,000	15%	105,940	11%

Monitoring Item 20

Sub-Item 20b: Pine Beetle Levels and Trends

An aerial survey was conducted in late August 1999 to estimate damage levels caused by bark beetles, mountain pine beetle and Ips, on ponderosa pine. The survey indicated that there were 25,332 trees killed on National Forest land on 17,396 acres. This means that an estimated 450 thousand cubic feet of volume is lost. An additional 340 trees on 399 acres were killed on lands surrounding the National Forest. This represents more than a doubling in the level of damage in the Black Hills compared with 1998. Most of the tree mortality was scattered in small groups or as single trees. However, large areas of concentrated mortality were detected in Beaver Park, Kirk Hill, near Steamboat Rock, areas south and west of Bear Mountain extending to the south end of Lemming Draw, around Silver City/Pactola Reservoir, areas west of Deerfield, and the Boles Canyon area.

The Forest has been challenged on efforts to directly attack the beetles, but continues with silvicultural treatments to reduce stand susceptibility.

	FY1998	FY1999
Trees killed	10,726	25,332
Acres Affected	10,062	17,396
Thousand Cubic Feet Of Volume Lost	190	450

Monitoring Item 20

Sub-Item 20c: Insect and Disease Evaluations

Biological evaluations of mountain pine beetle-caused mortality were conducted in the Beaver Park, Steamboat Rock, Blackhawk, Bear Mountain, Mt. Rushmore, and the Pactola/Sheridan/Deerfield Lake Recreation areas. These evaluations consisted of on the ground surveys to estimate the level of infestations and how they have changed over the past 3 years. Based on the ground surveys, beetle-caused mortality seems to be static or is declining throughout most of the Blackhawk and Steamboat Rock areas, Spearfish Canyon, around Pactola Lake and Silver City, and Mt. Rushmore National Memorial. Increasing mortality was found in the Beaver Park and surrounding areas, Bear Mountain and Deerfield Lake areas. Beetle populations seem to be increasing at about a 2- to 3-fold rate in these later three areas.

In addition to these evaluations on bark beetles, we have initiated a long-term study to examine the flight periods of adult mountain pine beetle and pine engraver beetle. Baited funnel traps were checked weekly throughout much of 1999 to determine when the beetles began flying and when they stopped. This study will take several years to account for the year-to-year variation in flight periods caused by environmental factors.

Significant hail damage and possible needlecast diseases caused defoliation of all tree species and ages on Kirk Hill, Spearfish/Nemo District in the spring 1999. The defoliation appeared as a dramatic yellowing and thinning of the crowns with most of the damage occurring on the same tree sides indicating directional weather damages. Many of the remaining pine needles of these trees are damaged with dark bands and red-yellow spots, which may be the beginning signs/symptoms of needlecast disease infection. Most of ponderosa pine and a few white spruce were almost completely defoliated. Even some of the understory ground juniper is affected and discolored. The aspen and paper birch in the area were also damaged by the hail and appeared to have more dead branches and top kill than usual.

The possible needlecast disease of the pines may be *Dothistroma pini*. Several conifer samples were collected from Kirk Hill and evaluated for signs of the needlecast disease. Fungal spores were observed but further development of the disease is needed to confirm the identification of the needlecast disease.

While *D. pini* has not been reported in the Black Hills, it occurs on ponderosa pine in several states of the Great Plains. The damage caused by the needlecast disease will be secondary to the hail damages on these trees. One to two years of severe storm damage may kill young pines; older pines will probably survive two or more years of defoliation, but will be significantly weakened and susceptible to bark beetle attack.

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Forest Health Management (FHM) installed 8 plots to evaluate the recovery from this hail damage for the next five years. FHM will monitor annually population increases of mountain pine beetle, *Ips* beetle, or needlecast diseases in the Kirk Hill hail damage sites.

Monitoring Item 21: Exotics

Detection surveys for the gypsy moth were continued at recreation and administrative sites on the forest in 1999. No moths were caught in these traps; however, moths were caught in surrounding areas near the National Forest. The need for continued monitoring of this introduced pest is warranted.

Monitoring Items 22: Fuel Loading Hazard

The combination of all fuels influencing activities accounted for an estimated 176,000 tons of activities' slash being treated in accordance with Forest Plan required treatment standards.

All activities which generate fuels (reference Monitoring Item 23: FIRE - Fuel Treatment) require an assessment to determine appropriate fuel treatment as outlined by Land and Resource Management Plan (LRMP) Guideline 4110 (page II-55, LRMP). This assessment and prescribed treatment insure that on-site fuel hazards either remain at pretreatment levels or are reduced as necessary based on risk and/or values present.

No fuel-generating activities occurred on areas of the Forest where the Black Hills National Forest Fire Protection Assessment (FPA) rated existing fuel "hazards" low. Of the 28,029 acres of fuel treatment, nearly 60 percent of it occurred in areas identified in the FPA as having a high hazard index. Prescribed treatments in these areas reduced the hazard index to moderate or low levels. Fuel treatment on the balance of the activity acres occurred on areas identified by the FPA as having a moderate hazard index. Prescribed treatment in these areas either reduced the hazard index or resulted in no change to the hazard index based on the fire "risk" or "values" present.

High Hazard Acres:

LRMP Baseline (Decade 1)	LRMP Baseline (Decade 2)	1998	1999
580,434	519,274	564,561	547,744

Monitoring Item 23: Fuel Treatment

The Forest accomplished fuel treatment related activities on a total of 28,029 acres of the National Forest in FY1999. Included in this work were activities as listed below:

	FY1998	FY1999
FUEL TREATMENTS	ACRES	
Pile Creation: Activity Fuels	1,454	595
Pile Burning: Natural Fuels	476	262
Activity Fuels	2,230	1,430
Prescribed Burning	1,633	1,830
Slash Removal	201	76
Urban Interface Thinning and Piling	28	111
Lop and Scatter (force account)	1,467	1,687
Pine Encroachment and Disposal	2,208	1,220
Pre-commercial Thinning and Associated Fuel Treatment	9,247	4,579
Aspen Regeneration	470	520
Purchaser Contribution - Lop and Scatter/Removal	7,041	6,027
Fuel Break Construction - associated with and included in the above acres	354	524

(See 1999 Forest Summary Silva Report as extracted from Rocky Mountain Resource Information System [RMRIS] data base).

Much of the above acreage is associated with the Forest's active timber sale program.

Monitoring Item 24

Sub-Item 24a: Fire Suppression

The Black Hills National Forest experienced a significantly below-average fire occurrence year. Timely and record-level precipitation promoted early containment of most fires. There were 71 fires during the year of which 22 were lightning caused. The total number of fires was well below the Forest average of 139 and the number of lightning fires fell short of the normal 100. The abnormally wet year is further evidenced by the fact that only 181.16 acres of the National Forest were burned by wildfire.

The Forest completed a revision of its National Fire Management Analysis System (NFMAS) data in 1999. The revised analysis and associated fire modeling places projected annual losses at 3,253 acres with a suppression budget funded at the Most Efficient Funding Level (MEL). Recorded losses as identified above were significantly below the norm and well below the NFMAS projections. The suppression program for FY 1999 was funded at approximately 40 percent of the revised MEL budget level. All fire reports have been submitted and entered into the FIRESTAT Database at Kansas City.

Monitoring Item 24

Sub-Item 24b: Fire Prevention

Indicators: Interagency involvement and or assessment of the following items:

- **Status of fire management agreements with partner agencies;**

All cooperator agreements and annual operating plans were reviewed and signed as required.

- **Involvement in interagency fire training exercises;**

The Forest continues to play a lead role in interagency fire training by providing qualified instructors, financial support and course coordination for much of the fire training offered in the Black Hills each year. The Forest again provided overall leadership in coordination of the 8th annual Hardy Exercises. Building on the prior years success exercises were developed at two proficiency levels (basic and advanced) and included extension of the training exercise to Saturday to accommodate cooperating volunteer fire departments. Incident Commander Type 4 (ICT4) trainees were put through the paces with realistic challenges associated with type 4 incidents in transition to more complex scenarios. The entire training exercise was conducted as a simulated incident involving a complex of fire activity. Managing the exercise as an incident provided an opportunity for individuals key to the Black Hills Initial Management Group (IMG) to train for interim management of a real incident. The Hardy Exercise has evolved over the years to become the primary medium for interagency fire training. All training was again patterned after the Crew Resource Management (CRM) technique as outlined in the Findings From the Wildland Firefighters Human Factors Workshop (5100-F&AM). Instructors for the exercise represented the Forest Service, National Park Service, South Dakota Division of Resource Conservation and Forestry, Custer State Park, Rapid City Fire Department, local Volunteer Fire Departments and the Pennington County Fire Coordinators Office.

Other wildland fire training hosted by the Forest and made available to cooperators at no cost included S-290, S-230, and S-270. Cooperators elected to host separate Basic Fire School (S-190, 130 etc.) sessions in 1999. In the past one large session hosted by all cooperators was held at Rapid City. Cooperators felt that that session was getting too large to accommodate the needed hands on training and student-instructor contacts that could be achieved with a smaller class size. Four separate sessions were hosted on the Forest.

- **Involvement in pre-suppression and prevention activities;**

The Forest played a major role in organizing the joint fire management booth at the Annual Black Hills Stock Show in partnership with the South Dakota Interagency Fire Council (SDIFC). Prevention material and wildland fire information were displayed and made available at all other shows (i.e. Black Hills Sports Show) as well as at all office locations throughout the year.

- **Involvement in South Dakota Interagency Fire Council meetings and activities;**

The Forest is a member of the SDIFC and an ad hoc member of the Black Hills Fire Advisory Board (BHFAB). Both of these organizations provide interagency coordination of prevention, pre-suppression and suppression activities in the Black Hills and surrounding areas. The Forest participates in and provides representation to various committees and task groups of these two active organizations.

- **Effectiveness of the Custer Interagency Dispatch Center as assessed by fire management**

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partners;

The Black Hills National Forest in cooperation with the Bureau Of Indian Affairs Office at Aberdeen South Dakota finalized the charter for the Custer Interagency Dispatch Center to establish a governing Board of Directors to oversee Center operations and to formally establish it as a fully functioning sub-geographic component of the National Interagency Dispatch system. The charter was circulated for approval signatures of the cooperating agencies and all signed with the exception of the State of South Dakota. A panel of subject-matter-specialists convened in 1999 to review the Center. This group documented their recommendation in a report, and listed numerous areas needing attention, which would serve to modernize and improve overall operation at the Center. A meeting of the Center's Board of Directors will be convened early in calendar year 2000 to address the recommendations contained in the report.

Activities at the Center this year included a flurry of filling early season resource orders to meet the National fire emergency in Florida. Late season activities were associated with the fire situations in Region 5. Overall activities at the center were below normal due to lower-than-average fire activity across the nation and in particular, within the local area. No large fire activity occurred in the geographic area and consequently the Center did not figure into any individual fire reviews.

The Center Manager received no complaints or dissatisfaction with activities at the Center in 1999.

- **Assessment of suppression support afforded partners through ICS process and as might be identified through post fire reviews, reports or exit conferences;**

and

- **All other information which might cast light on the Forest's record of performance related to efficiency of operation in the fire management arena through interagency cooperation and prevention activities.**

We had no major fires in the Black Hills this year.

Monitoring Item 25: Wildlife – Threatened and Endangered species

This monitoring item is designed to track winter bald eagle trends on the Forest. There are neither known traditional winter roosts nor nests in the Black Hills. The Monitoring Implementation Guide calls for one transect per District between December and March. In actuality District Biologists record bald eagle sightings throughout the winter during normal work activities. Bald eagle sightings up to January 31, 2000 are presented below by District. All sightings are presented regardless of landownership.

Bald eagle monitoring will occur each year to develop a winter population database. Through time the information will be used to assess changes in numbers and spatial distribution. No conclusion can be drawn from this data, because this is the second reporting year.

District	Date	Location	Number
Custer/Elk Mountain	11/99-12/99	West of Custer along Highway 16	10
Custer/Elk Mountain	11/99	1 mile east of Pringle	1
Custer/Elk Mountain	10/99	Shirttail Canyon	1
Pactola/Harney	12/1/99	Deerfield	1
Pactola/Harney	12/7/99	T1S, R4E, Sec. 36	1
Pactola/Harney	1/13/99	Spring Creek, Sheridan Lake Road	1
Pactola/Harney	12/7/99	Tigerville	1
Pactola/Harney	3/8/99	Clear Ck. Rd. and HWY 385	1
Pactola/Harney	11/18/99	West northwest of Mitchell Lake	1
Pactola/Harney	11/17/99	Nemo Road	1
Pactola/Harney	11/18/99	Sheridan Lake Inlet	1
Pactola/Harney	12/7/99	Rockerville	1
Pactola/Harney	3/4/99	T1N, R5S, Sec. 27	6
Pactola/Harney	2/1/99	Over SO office	1
Pactola/Harney	2/5/99	T1N, R5R, Sec. 27	6

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District	Date	Location	Number
Pactola/Harney	2/26/99	T1S, R6E, Sec. 4	1
Pactola/Harney	1/22/99	Just East of Spring Creek PG.	1
Pactola/Harney	1/5/99	Sanders Ranch	1
Pactola/Harney	1/4/99	Horse Creek	1
Pactola/Harney	2/3/99	Bald Hills	4
Pactola/Harney	1/5/99	Hwy 385	1
Pactola/Harney	1/13/99	Pactola Res.	2
Pactola/Harney	1/4/99	Pactola Res.	1
Pactola/Harney	12/4/98	Pactola Basin	1
Pactola/Harney	12/14/98	Bald Hills	6
Pactola/Harney	1/4/99	T1S, R8E,	2
Pactola/Harney	12/4/99	Between 3 Forks and Sheridan Lake	1
Pactola/Harney	11/23/99	Blackhawk, T2N, R7E,	1
Pactola/Harney	11/19/99	Near Placerville Church Camp	1
Pactola/Harney	12/15/99	South end of Sheridan Lake	1
Pactola/Harney	12/2/99	T2S, R4E, Sec. 12	1
Pactola/Harney	3/10/2000	T1S, R5E, Sec. 15	1
Pactola/Harney	3/10/2000	T3N, R5E, Sec. 15	1
Pactola/Harney	3/10/2000	T5N, R4E, Sec. 16	1
Spearfish/Nemo	11/99	T6N, R1E, Crow Peak	4
Bearlodge	11/26/99	Sand Creek	1
Bearlodge	10/99-12/99	T53N, R54W Blacktail	4
Bearlodge	11/99	T53N, R62W. Red Nose	2
Bearlodge	11/99	T50N, R60W, Wagon Canyon	3
Bearlodge	11/990- 12/99	T51N, R61W, 863 Road, West of Sand Creek	4
Bearlodge	10/99	T50N, R62W, Fish Mountain/Black Buttes	1

Monitoring Item 26: Wildlife – Habitat Capability Relationships, including Management Indicator Species (MIS)

The following is a summary of how the Forest is addressing MIS.

Rocky Mountain Elk - The Forest is involved in a cooperative elk study being conducted by the Rocky Mountain Research Station. Other partners include South Dakota Department of Game, Fish and Parks and The Rocky Mountain Elk Foundation. A principal objective of the study is to validate the habitat relationship model, which will yield better predictive information on the effects of habitat change on elk use and numbers. Fieldwork is scheduled through 2002.

Land Snails - Dr. Terrence Frest conducted a Forestwide survey of land snails during 1999. Dr. Frest resurveyed colonies he first found in the early 1990s to assess population changes and sample areas not included in the first study. The final report is due in the spring of 2000. This information will yield trends in size and vigor for these colonies.

Breeding Bird Surveys - Each year qualified volunteers work under partnership with the Forest to complete Breeding Bird Surveys as part of a national program administered by the US Geological Survey. Results are available on their web site. The Forest will report on population trends every 3 years.

Brown Creeper, Black-backed and Three-toed Woodpeckers - The Forest is working with the Rocky Mountain Research Station to develop a study plan to evaluate habitat relationships, validate the ARC-HABCAP model for local Black Hills conditions and assess species abundance. At this time the Forest does not have adequate funds to initiate the study.

Regal Fritillary Butterfly - The Forest is evaluating two means to monitor populations. First, District biologists would locate suitable habitats and existing populations. These sites would be surveyed on a regular schedule to determine trends. Another possibility being considered is to contract with a qualified butterfly specialist to complete initial surveys and establish a monitoring protocol.

Northern Goshawk - The Custer/Elk Mountain District monitored five historic goshawk nests in 1999. None were active. The Spearfish/Nemo District monitored five active goshawk nests and all were active. Spearfish/Nemo also noted two territories that were thought to be active but for which no nest was found.

Monitoring Item 27: Scenic Integrity

During FY 1999 two recreation projects that had been planned under the 1997 Revised Forest Plan were monitored.

To date, no timber sales that were planned under the Forest Plan have been completed; thus none were monitored.

Recreation Facilities Construction:

Two recreation sites on the Harney-Pactola Ranger District (Breezy Point Day Use - completed this year and Horsethief Day Use - approx. 90 % complete) were reviewed by an interdisciplinary team, including the Deputy Forest Supervisor, the Recreation/Engineering/Lands Staff, a Landscape Architect, an Engineer, and numerous Recreation Specialists.

Both recreation sites were designed and constructed to be fully accessible. Facilities include: rest rooms, parking, trails, overlooks, picnic areas, and a fishing platform. The Scenic Integrity Objective (SIO) for both Recreation Sites, that have a Development Level 3, is MODERATE. Forest Plan Guideline #5210.

“A MODERATE scenic integrity refers to landscapes where the valued landscape character “appears slightly altered”. Noticeable deviations must remain visually subordinate to the landscape character being viewed”. Landscape Aesthetics, pg. 2-4.

Each site, prior to this project, had limited development and met the existing SIO.

At the Breezy Point site, the overall design of the parking, trails and overlooks were found to lay on the landscape quite nicely. Care was taken to minimize vegetation disturbance, road reclamation and excavation was blended back into the natural contours, and site furnishings borrowed elements and colors from the surrounding landscape. The only area noted that did not fit the site was the upper overlook: its geometric shape does not blend in well with the natural free flowing design and the natural setting of the rest of the site. This site is only visible in the background from the Black Elk Wilderness, and blends into the existing landscape character so completely and such scale, that they are not evident to the observer. Overall this site met the Scenic Integrity Objective of MODERATE.

At the Horsethief site, along Horsethief Lake, the facility had to lay between the lake and a steep slope. The design contained some geometric elements (straight trails and a square fishing platform) that did not blend as well as it could have into the landscape. Freeform shapes or shapes with rounded corners and curvilinear trails would have appeared more natural on the landscape. The color of site furnishings (bench, stairs, and handrails) needs to be more closely coordinated to match the natural surroundings. “Stamping” the concrete, and adding a color additive, to make the concrete appear as flagstone, was found to be very effective and provided an excellent natural appearance. The color of freshly excavated and placed Riprap, along the south shore, did not blend in with its surroundings. It was felt that possibly after a winter of weathering the bright, light color of the rock maybe less noticeable (this feature will need to be monitored). This site is visible in the foreground of Horsethief Campground and Highway 244 (only for a brief moment unless vehicles stop along the side of the highway), and is visually subordinate from these locations – primarily due to the shaded appearance of the site (most of vegetation was protected and now provides shade throughout the day that helps conceal the site). When the project is completed it should meet the SIO of MODERATE.

	Scenic Integrity	Scenic Integrity		Development
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	Objective	Achieved	ROS	Level
Breezy Point Day Use	Moderate	Moderate	Rural	3
Horsethief Day Use	Moderate	Moderate	Rural	3

Monitoring Item 28: Heritage Resources

Monitoring items for heritage resources measure two areas of emphasis for the program. Monitoring items 1 through 4 reflect our responsibility to comply with Federal law and regulation for the protection of heritage resources under Section 106 of the National Historic Preservation Act (NHPA). Monitoring items 5 through 7 reflect our responsibility to preserve and interpret heritage resources for public benefit under Section 110 of the NHPA. The relatively large numbers exhibited in monitoring items 1 through 4 are in themselves a reflection of the large number of undertakings conducted on the Black Hills National Forest each year. The relatively low numbers exhibited in monitoring items 5 through 7 indicate a reduction in NFHR dollars over the past few years and a need to increase efforts in the Section 110 portion of the heritage resource program.

MONITORING ITEMS	FY1998	FY1999
1. Heritage resources compliance process completed prior to signing of environmental decision document (comply with NEPA, NHPA, and Chiefs Direction).	229 Projects	59 Projects
2. Avoidance or mitigation requirements effectively implemented prior to, during, and after project (comply with NHPA/NEPA).	32 mitigation or avoidance projects were monitored.	26 mitigation or avoidance projects were monitored.
3. Inventories conducted to comply with the Archaeological Resource Protection Act, as amended 1988.	76 projects covering 93,873 acres were completed.	225 projects covering 78,938 acres were completed.
4. Protection of heritage resources listed in, or eligible for listing on the National Register of Historic Places. May or may not be associated with project specific activities (comply with NHPA).	106 sites were monitored.	97 sites were monitored.
5. Number of heritage resource interpretive sites provided (including sites, signs, roadside pullouts, brochures, public participation opportunities, sponsorship of heritage activities, etc.).	2 public outreach projects, and 1 interpretive program were provided.	25 interpretive programs were provided.
6. Number of heritage resource stabilization and rehabilitation projects conducted (comply with NHPA).	1 project was conducted.	2 projects were conducted.
7. Increase in heritage resources listed on the National Register of Historic Places (comply with NHPA).	0 sites were nominated to or listed on the NRHP.	0 sites were nominated to or listed on the NRHP.

Monitoring Item 30: Recreation Opportunities

ROS:

There were no changes in FY 1999 to the Recreation Opportunity Spectrum (ROS) as mapped in the Revised Forest Plan.

Recreation Activity

ACTIVITY OUTPUTS	UNITS	1997	1998	1999
Developed Recreation	Recreation Visitor Days	365,800	342,600	339,600
Downhill Skiing	Recreation Visitor Days	5,300	4,500	4,000
Dispersed Recreation	Recreation Visitor Days	2,920,000	2,814,200	2,886,800
Off-road Vehicle Use	Recreation Visitor Days	77,400	74,400	75,900
Wilderness Use	Recreation Visitor Days	36,900	34,500	28,300

Detailed Recreation Use:

Black Hills National Forest Recreation Use by Activity 1993-1999

Source: RIM Output Document 2300-1k.

Recreation use in thousands of recreation visitor days.

RECREATION ACTIVITY	1995	1996	1997	1998	1999
01.1 Viewing Scenery	176.6	179.4	200.5	192.9	196.8
01.3 Viewing Activities	14.3	14.5	14.5	13.9	14.2
01.4 Viewing Works	0.0	0.0	0.4	0.4	0.5
11.1 Auto Travel	2063.7	2096.3	2017.8	1941.1	1980.6
11.2 Motorcycle Travel	72.3	73.4	73.4	70.6	72.0
11.3 Snow Travel	139.5	164.7	164.7	141.3	126.3
11.5 Bus Touring	0.7	0.7	0.7	0.7	0.7
12.2 Boat, Powered	10.0	9.3	7.9	7.9	8.1
13.2 Aerial Trams	0.3	0.0	0.0	0.0	0.0
14.1 Hiking and Walking	137.3	141.4	168.5	168.5	171.9
14.2 Bicycle	25.1	25.8	25.8	25.8	26.3
14.3 Horseback	54.3	55.9	56.5	56.5	57.6
14.5 Trailhead/Snow-park	0.0	0.0	11.9	11.9	12.1
15.1 Canoeing	2.2	2.1	2.2	2.2	2.2
15.2 Sailing	1.1	1.0	1.0	1.0	1.0

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RECREATION ACTIVITY	1995	1996	1997	1998	1999
15.3 Other watercraft	11.8	11.0	8.3	8.3	8.5
21.1 Team Sports	1.1	1.1	0.0	0.0	0.0
21.2 Individual Sports	3.8	3.9	0.0	0.0	0.0
21.3 Games and Play	0.9	0.9	7.4	7.4	7.5
22.1 Swimming & Water-play	23.8	22.1	14.7	14.7	15.0
22.2 Diving	1.5	1.4	0.0	0.0	0.0
22.3 Water-skiing & Other	7.2	6.7	6.7	6.7	6.8
31.1 Fishing, Cold Water	155.9	150.4	150.4	147.7	167.2
31.2 Fishing, Warm Water	0.0	0.0	0.0	0.0	0.0
31.4 Fishing, Ice	8.6	8.2	8.2	8.1	9.2
41.1 Camping, General Day	91.8	85.4	97.5	92.9	92.3
41.2 Camping, Auto	37.2	34.6	37.5	35.7	26.8
41.3 Camping, Trailer	74.4	69.2	79.3	75.6	61.6
41.4 Camping, Tent	44.7	41.5	43.9	41.8	61.3
41.5 Organ. Camping, Day	0.7	0.7	3.0	2.9	3.0
41.6 Organ. Camping, Night	19.6	18.2	3.2	3.0	3.1
43.1 Picnicking	40.2	37.3	32.6	31.1	31.7
46.1 Resort, General	14.1	14.1	8.3	8.3	8.5
46.2 Resort Lodging	3.6	3.6	0.0	0.0	0.0
46.3 Recreation Cabin Use	81.7	81.7	89.5	89.5	89.5
51.1 Ice Skating	0.1	0.1	0.5	0.4	0.4
51.3 Skiing, Downhill	4.5	5.3	5.3	4.5	4.0
51.4 Snow Play	5.1	6.0	5.0	4.3	3.8
51.5 Cross-country Skiing	5.6	6.6	6.6	5.7	5.1
61.1 Hunting, Big Game	87.4	79.6	46.8	50.1	34.8
61.2 Hunting, Small Game	3.8	3.5	7.4	7.9	3.3
61.3 Hunting, Upland Game	6.9	6.5	10.6	11.3	7.4
61.4 Hunting, Waterfowl	1.9	1.7	2.0	2.1	1.0
62.1 Nature Study - Wildlife	16.3	16.8	16.7	16.7	54.5
62.2 Nature Study - Hobby	8.2	8.4	8.3	8.3	8.5
63.1 Mountain Climbing	1.0	1.1	3.0	3.0	3.1
64.1 Gathering Forest Products	22.2	22.5	22.5	21.7	21.3

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RECREATION ACTIVITY	1995	1996	1997	1998	1999
81.1 Viewing Interp. Exhibits	0.8	0.8	2.5	1.9	1.0
81.2 Attending Talks	17.5	16.8	5.0	3.8	3.9
81.3 Touring, Guided	2.1	2.0	0.0	0.0	0.0
81.4 Touring, Unguided	11.0	10.5	0.0	0.0	0.0
81.5 Walking, Guided	7.4	7.1	0.0	0.0	0.0
81.6 Walking, Unguided	21.3	20.4	0.0	0.0	0.0
81.7 Viewing Interp. Signs	11.2	10.7	10.9	8.4	8.6
81.8 Listening Audio Programs	0.3	0.3	0.1	0.1	0.1
81.9 General Information	17.4	16.7	19.9	15.3	15.6
TOTAL =	3572.0	3599.9	3509.4	3373.9	3438.7
Wilderness Use (Included in Total Above)	12.9	33.9	36.9	34.5	28.3

SUMMARY FOR FOREST PLAN MONITORING

RECREATION ACTIVITY	1995	1996	1997	1998	1999
Developed - Public Sector	422.7	397.2	365.8	342.6	339.6
Developed - Private Sector	120.0	118.3	104.0	103.7	104.1
Total Developed	542.7	515.5	469.8	446.3	443.7
Downhill Skiing	4.5	5.3	5.3	4.5	4.0
Dispersed	2932.9	2960.4	2920.0	2814.2	2886.8
ORV	79.0	80.3	77.4	74.4	75.9
Wilderness	12.9	33.9	36.9	34.5	28.3

- ❖ Developed - Public Sector = Add Recreation Activities 1.3 + 21.1 + 21.2 + 21.3 + 22.1 + 22.2+41.1 + 41.2 + 41.3 + 41.4 + 43.1 + 81.1 thru 81.9.
- ❖ Developed - Private Sector = Add Recreation Activities 13.2 + 41.5 + 41.6 +46.1 thru 46.3.
- ❖ Total Developed = Public Sector plus Private Sector.
- ❖ Downhill Skiing = Recreation Activity 51.3.
- ❖ Dispersed = Total Use minus Developed Use minus Downhill Skiing minus ORV Use minus Wilderness Use.
- ❖ ORV = Add Recreation Activities 11.1 + 11.2 and multiply by .037.
- ❖ Wilderness = Actual Use from Wilderness Report.

Monitoring Item 31: Recreation Use, Trends And Demographics

Condition and Use of Recreation Facilities:

The lack of adequate O&M funding continues to be a problem in meeting Forest Plan standards for maintaining developed recreation sites. The deferred maintenance backlog for recreation facilities on the Forest is estimated at \$25,900,000. These funds are needed for four categories of backlog work:

Category 1: \$9,780,000 of backlog for facility repair and reconstruction and resource treatment needed to comply with health and safety standards.

Category 2: \$5,950,000 of backlog for resource treatment needs including vegetation treatment, soil and surface treatment, and cultural resource site protection and mitigation.

Category 3: \$9,990,000 of backlog for facility repair and reconstruction and resource treatment needed to keep a site open in compliance with planned management standards.

Category 4: \$180,000 of backlog for facility repair to return to a user fee system previously charged or to continue a user fee system.

The Forest has used the campground concession program as much as possible to help free up the funding needed to take care of all of our recreation facilities. In addition, almost \$3 million dollars of Capital Investment Projects have been identified and approved for future funding to deal with major rehabilitation or reconstruction work in our developed recreation facilities.

Amount of Use:

Since 1982, there has been a long, gradual decline in camping use on the Black Hills National Forest, going from a high of 44% occupancy to a low of 31% occupancy in 1990. In 1991, camping occupancy increased to 34%, reversing the downward trend for the first time in almost ten years. This may have been influenced by President Bush's visit to Mt. Rushmore and the Black Hills National Forest. In 1992 camping use declined again, but rebounded in 1993 and 1994 and stabilized at about 42% in 1995 through 1999 (approximately back to where it was in 1982).

Since 1982, the Forest has steadily raised its campground fees to be comparable with similar increases in private sector fees. There appears to be some relationship to our increasing camping fees and the decreasing occupancy rates as discussed in the preceding paragraph. This relationship was thoroughly reviewed in 1993. In consultation with the private sector campgrounds, a new campground evaluation rating system was developed and applied to all the Forest Service campgrounds and 23 private campgrounds which volunteered to be a part of the study. Based upon a complete reanalysis of the point system and comparable private sector fees, a new fee schedule was implemented in 1994. The new fees were somewhat less than those developed by the old system.

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**BLACK HILLS NATIONAL FOREST
CAMPGROUND FEES AND PERCENT OCCUPANCY
1994 – 1999**

	Average											
	Unit Fees		Fee Campgrounds				Non-fee Campgrounds			All Campgrounds		
	Forest	Private	Total Fees	Occupied	Available	Percent	Occupied	Available	Percent	Occupied	Available	Percent
Year	Service	Sector	Collected	Units	Units	Occupancy	Units	Units	Occupancy	Units	Units	Occupancy
1995	\$10.05	\$19.41	\$314,679.37	32,581	77,395	42%	3,210	5,610	57%	35,791	83,005	43%
1996	\$10.37	\$19.89	\$328,033.00	33,354	78,652	42%	1,985	4,182	47%	35,339	82,834	43%
1997	\$10.63	\$20.88	\$335,280.88	32,395	78,465	41%	1,284	3,366	38%	33,679	81,831	41%
1998	\$11.13	\$21.84	\$355,460.24	33,036	77,486	43%	1,717	3,366	51%	34,753	80,852	43%
1999	\$12.43	\$22.54	\$357,883.50	31,363	78,668	40%	1,738	3,795	46%	33,101	82,463	40%

As shown by the fee collection information in the following table, nearly 27 percent of all the recreation use in fee areas was processed through the reservation system. This is an increase over last year of three percent.

		FEE CAMPGROUNDS						NON-FEE CAMPGROUNDS	
	NUMBER CAMPING UNITS	UNIT FEE	FEE SEASON	DAYS IN SEASON	TOTAL FEES COLLECTED	PAID UNITS	OCCUPANCY RATE	SAMPLE STUDY OCCUPANCY RATE	OCCUPIED UNITS (5/21-9/12)
A. BEARLODGE DISTRICT									
1. Bearlodge*	8	~	~	~	~	~	~	31%	285
2. Cook Lake (\$7/\$11)*	34	\$ 9.00	5/21-9/12	115	\$ 9,374.00	933	24%	~	~
3. Reuter*	24	\$ 8.00	5/21-9/12	115	\$ 2,540.00	360	13%	~	~
4. Sundance*	10	\$10.00	5/21-9/12	115	\$ 1,900.00	199	17%	~	~
DISTRICT TOTAL	76				\$13,814.00	1492			285
B. SPEARFISH/NEMO DISTRICT									

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		FEE CAMPGROUNDS						NON-FEE CAMPGROUNDS	
	NUMBER CAMPING UNITS	UNIT FEE	FEE SEASON	DAYS IN SEASON	TOTAL FEES COLLECTED	PAID UNITS	OCCUPANCY RATE	SAMPLE STUDY OCCUPANCY RATE	OCCUPIED UNITS (5/21-9/12)
1. Boxelder Forks*	14	\$ 9.00	5/21-9/12	115	\$6,345.00	789	49%	~	~
2. Dalton Lake*	8	\$ 9.00	5/21-9/12	115	\$3,564.00	407	44%	~	~
3. Hanna*	13	\$ 9.00	5/21-9/12	115	\$5,049.00	632	42%	~	~
4. Rod and Gun*	7	\$ 8.00	5/21-9/12	115	\$ 3,112.00	418	52%	~	~
5. Roubaix (\$14/\$16)*	56	\$15.00	5/21-9/12	115	\$31,763.00	2483	39%	~	~
6. Timon*	7	\$ 9.00	5/21-9/12	115	\$ 3,851.00	466	58%	~	~
DISTRICT TOTAL	105				\$53,684.00	5195			
C. PACTOLA/HARNEY DISTRICT									
1. Bear Gulch *	8	\$7.50	5/21-9/12	115	\$3,600.00	488	53%	~	~
2. Black Fox	9	~	~	~	~	~	~	57%	590
3. Castle Peak	9	~	~	~	~	~	~	59%	611
4. Custer Trails (\$7/\$9)*	16	\$8.00	5/21-9/12	115	\$1,585.00	238	13%	~	~
5. Ditch Creek *	13	\$9.00	5/21-9/12	115	\$5,103.00	623	42%	~	~
6. Dutchman *	45	\$10.00	5/21-9/12	115	\$14,634.00	1594	31%	~	~
7. Horsethief (\$15/\$17) *	36	\$16.00	5/21-9/12	115	\$44,230.50	3070	74%	~	~
8. North Cove Group *	54	\$ 5.28	5/21-9/12	115	\$5,678.50	1615	26%	~	~
9. Oreville *	26	\$14.00	5/21-9/12	115	\$13,286.00	1157	39%	~	~
10. Pactola (\$14/\$16)*	80	\$15.00	5/21-9/12	115	\$61,496.00	4678	51%	~	~
11. Sheridan (\$14/\$16)*	129	\$15.00	5/21-9/12	115	\$71,926.00	5355	36%	~	~
12. Whitetail *	17	\$10.00	5/21-9/12	115	\$9,657.00	1099	56%	~	~
13. Willow Creek Group *	11	\$21.82	5/21-9/12	115	\$14,671.00	670	53%	~	~
DISTRICT TOTAL	453				\$245,867.00	20587			1201
D. CUSTER/ELK MOUNTAIN DISTRICT									
1. Beaver Creek	8	\$8.00	5/21-9/12	115	\$1,254.00	165	18%	~	~
2. Bismarck*	23	\$14.00	5/21-9/12	115	\$22,817.50	1869	71%	~	~

Black Hills National Forest

	NUMBER CAMPING UNITS	FEE CAMPGROUNDS						NON-FEE CAMPGROUNDS	
		UNIT FEE	FEE SEASON	DAYS IN SEASON	TOTAL FEES COLLECTED	PAID UNITS	OCCUPANCY RATE	SAMPLE STUDY OCCUPANCY RATE	OCCUPIED UNITS (5/21-9/12)
3. Comanche*	34	\$10.00	5/14-9/12	122	\$14,515.00	1684	41%	~	~
3. Iron Creek*	9	\$16.00	5/21-9/12	115	\$5,932.00	371	36%	~	~
4. Moon	3	~	~	~	~	~	~	21%	72
5. Redbank Spring	4	~	~	~	~	~	~	39%	179
DISTRICT TOTAL	81				\$44,518.50	4089			252
FOREST TOTAL OR AVERAGE	715	\$12.43			\$357,883.50	31363	40%	46%	1738

*Fees Collected by Concessionaire.
Reservation Collections = \$97,034.50 or 27.1% of Total.

As shown in the following table, the amount of use through Golden Age/Golden Access Permits is significant, comprising 16 percent of total use, which is 2 percent higher than in 1998.

BLACK HILLS NATIONAL FOREST 1999 SUMMARY GOLDEN AGE/GOLDEN ACCESS				
	FULL PRICE	HALF PRICE	TOTAL PAID UNITS	PERCENT GOLDEN AGE
A. BEARLODGE DISTRICT				
Cook Lake *	856	77	933	8.3%
Reuter *	275	85	360	23.6%
Sundance *	181	18	199	9.0%
DISTRICT TOTAL	1312	180	1492	12.1%
B. SPEARFISH/NEMO DISTRICT				
Boxelder Forks *	621	168	789	21.3%
Dalton Lake *	385	22	407	5.4%
Hanna *	490	142	632	22.5%

Black Hills National Forest

BLACK HILLS NATIONAL FOREST 1999 SUMMARY GOLDEN AGE/GOLDEN ACCESS				
	FULL PRICE	HALF PRICE	TOTAL PAID UNITS	PERCENT GOLDEN AGE
Rod and Gun *	360	58	418	13.9%
Roubaix *	2039	444	2483	17.9%
Timon *	390	76	466	16.3%
DISTRICT TOTAL	4285	910	5195	17.5%
C. PACTOLA/HARNEY DISTRICT				
Bear Gulch *	472	16	488	3.3%
Custer Trails *	176	62	238	26.1%
Ditch Creek *	511	112	623	18.0%
Dutchman *	1331	263	1594	16.5%
Horsethief *	2576	494	3070	16.1%
North Cove Group *	1615	0	1615	0.0%
Oreville *	743	414	1157	35.8%
Pactola *	4041	637	4678	13.6%
Sheridan *	4531	824	5355	15.4%
Whitetail *	832	267	1099	24.3%
Willow Creek Group *	670	0	670	0.0%
DISTRICT TOTAL	17498	3089	20587	15.0%
D. CUSTER/ELK MOUNTAIN DISTRICT				
Beaver Creek	148	17	165	10.3%
Bismarck *	1397	472	1869	25.3%
Comanche *	1220	464	1684	27.6%
Iron Creek *	371	0	371	0.0%
DISTRICT TOTAL	3136	953	4089	23.3%
FOREST TOTAL OR AVERAGE	26231	5132	31363	16.4%

*Concessionaire Operated Campground

Wilderness Resource:

Based on a regression analysis of the existing use data from 1981 to 1998, it is projected that the estimated annual carrying capacity of 32,100 RVDs will be reached in the year 2004. It should be noted, however, that wilderness use did exceed its capacity for the first time in 1996 with 33,900 RVDs, followed by 36,900 RVDs in 1997, 34,500 RVDs in 1998, and 28,300 in 1999 - 9 years sooner than predicted by regression analysis. It needs to be determined if these years are an anomaly or if the trend data is indicating a significant trend change.

Our records show that nearly 60 percent of the wilderness use occurs on two trails. These are the two main trails to Harney Peak, one from Sylvan Lake and the other from Willow Creek. With most use going to Harney Peak, one has to ask if visitors are really coming here for a wilderness experience, or are they hiking or horseback riding these trails to experience the view from the peak? Also, if use increases, will most use occur on these two trails? Indicators may be showing us that visitors to the Black Hills National Forest are more interested in a specific destination than a wilderness experience.

Other identified problems include the lack of fire in the ecosystem, public uses of the wilderness that could be accommodated elsewhere, inadequate trail maintenance, inadequate wilderness management funding, and outfitters who do not contribute to trail maintenance.

The possibility of using the recreation fee demo program or another system for issuing permits is being investigated with the objective of controlling use and generating revenue for wilderness management and trail maintenance.

Cumulative Trends of Recreation Use in the Black Hills:

The following tables display recreation use in the Black Hills National Forest.

AVERAGE ANNUAL TRENDS		
	Last 5 Years 1994-1998	Last 19 Years 1980-1998
Selected National Forest Activities:		
Black Hills Visitor Center	-1.3%	+2.8%
Black Elk Wilderness	+9.4%	+5.0%
Terry Peak Ski Area	-0.1%	+5.0%
Firewood Permits	-0.2%	-4.90%
Christmas Tree Permits	-4.7%	-2.3%
Fishing	+2.2%	+0.2%
Hunting	-9.7%	-0.2%
Motorized Travel	+1.0%	+4.0%
Campgrounds - Black Hills National Forest	-2.4%	+0.5%

Black Hills Visitor Center		Black Elk Wilderness			
Year	Visitors		Year	Visitors	Visitor-Days
1994	61252		1994	38550	12900
1995	58752		1995	63483	33900
1996	74079		1996	69227	36900
1997	56893		1997	64702	34500
1998	58018		1998	53098	28300
Annual Trend	+2.76%		Annual Trend	+4.96%	+11.46%

Note: FY1999 numbers were not available.

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TERRY PEAK SKI AREA		NATIONAL FOREST CAMPGROUNDS			
Skier Year	Lift Tickets	Year	Fee	Non-fee	All
1994-95	71291	1994	35011	3495	38506
1995-96	84128	1995	32581	3210	35791
1996-97	92702	1996	33354	1985	35339
1997-98	79541	1997	32395	1284	33679
1998-99	71100	1998	33036	1717	34753
Annual Trend	5.01%	Annual Trend	+1.54%	-4.11%	+0.53%

Note: FY1999 numbers were not available.

Firewood and Free Use Permits			
1994	3471	284	3755
1995	3394	243	3637
1996	3278	258	3536
1997	3821	238	4059
1998	3463	266	3729
Annual Trend			-4.85%

Note: FY1999 numbers were not available.

Christmas Tree Permits			
1994	7092	530	7622
1995	7026	872	7898
1996	6211	348	6559
1997	5761	341	6102
1998	6079	113	6192
Annual Trend			-2.34%

Monitoring Item 32: Access- Road Mileage

The following was the status of the Forest Development Road (FDR) System at the end of FY1999:

	December 1996 FEIS	FY98 MILES	FY99 MILES
FDR maintenance levels 1,2,3,4,5	5,204* ¹	5,219	5,271.0
FDR miles constructed	NA	13.3	21.2
FDR miles reconstructed	NA	102.0	178.1
FDR miles under Forest Service jurisdiction	4,651* ²	4,655.0	4,696.0
FDR miles under local government jurisdiction	553* ²	564.0	575.0
FDR miles obliterated	NA	0.0	27.3
FDR miles open year long, seasonally for low clearance vehicles	653* ²	687.0	687.0
FDR miles open year long, seasonally which are accessible to high clearance vehicles only	3,510* ²	3,274.0	3,280.0

*1 – December 1996 FEIS, pg II-61.

*2 – December 1996 FEIS pg III-426.

The Forest Service has recently increased emphasis on management of the transportation system. The Black Hills National Forest participated as a pilot Forest in developing assessment methods. Current Forest Plan direction emphasizes closing all newly constructed roads; and recent project decisions continue to close roads that are no longer needed, and to review access needs to private lands.

Monitoring Item 33: Access- Off-Road Vehicle Access

No new travel orders restricting off-road vehicle access were issued in FY1999. Travel opportunities remain unchanged.

The following decisions affecting vehicle access were made through project NEPA documents, although none have been implemented.

An existing 3,000-acre area closure was expanded to about 10,000 acres under the Binford project decision to protect resources in a previous wildfire area. Travel in this area is limited to designated roads and most roads are closed year around.

The Reddog/Slice project decision has designated a 10,250 acre-closure to protect wildlife.

Monitoring Item 34: Access- Trail Opportunities

The following is the status of the trail system:

	FY1998 MILES	FY1999 MILES
Forest development trail miles constructed	-0-	-0-
Forest development trail miles reconstructed	70.1	2.7
Forest development trail miles obliterated	-0-	-0-

Forest development trail miles by user type:

	FY1998 MILES	FY1999 MILES
Hiking, biking, horse, skiing, motorized:	17.7	17.7
Hiking, biking, skiing, motorized:	6.9	6.9
Hiking, biking, horse, skiing:	345.3	231.1*
Hiking, biking skiing:	6.8	7.8
Hiking, horse, skiing:	30.8	29.2
Hiking, skiing:	22.2	22.2
Hiking:	2.6	3.4
TOTAL:	435.7	320.6

* Mickelson Trail operation and maintenance has been transferred to the State of South Dakota.

Through monitoring, the following trails were identified where user conflicts exist or where user-type constraints are not effective, or where unacceptable resource damage is occurring:

1. Centennial Trail #89
2. Deerfield Lake Loop #40L
3. Deerfield Trail #40
4. Harney #9
5. Flume Trail
6. Bearlodge Trails
7. Little Spearfish Trail

Monitoring Item 35: Access- Right-Of-Way Acquisition

TYPE	FY1998			FY1999		
	CASES	MILES	ACRES	CASES	MILES	ACRES
Acquired	6	1.4	11.04	8	1.09	10.55
FLPMA*:						
Forest Road Easements Conveyed	2	1.48	11.87	3	.095	4.07
Private Road Easements Conveyed	5	1.21	7.99	7	.8067	6.5
FRTA* Easements Conveyed ¹	2	13.45	244.8	0	0	0

*FLPMA - Forest Land Policy Management Act

*FRTA - Forest Road and Trail Act

¹Previously under special use permit that was converted to easements in 1998.

Monitoring Item 36: Land Adjustment

	FY1998	FY1999
LAND ADJUSTMENT COMPLETED	ACRES	
Land Acquired through Exchange	414	479
Land Acquired through Donation	105	-0-
TOTAL ACQUIRED	519	479
LESS:		
Land Conveyed Out	255	498
NET CHANGE:	+264	-19

LAND ADJUSTMENT BEING PROCESSED	ACRES	
Land Acquiring through Exchange	479	894
Land Acquiring through Donation	0	-0-
TOTAL ACQUIRING	479	894
LESS:		
Land Conveying Out	498	723
NET CHANGE:	-21	+171

The BHNF has continued to foster communication with several conservation groups and state agencies with the objective of completing land adjustment exchanges and/or conservation easements for everyone's benefit.

Monitoring Item 37: Economic Efficiency - Cost

Budget:

		FY98	FY99
FUND CODE	FUND	DOLLARS	DOLLARS
	RECREATION, WILDERNESS AND HERITAGE RESOURCES		
	OPERATIONS		
NFRM	Recreation Management	835,000	584,000
NFWM	Wilderness Management	79,000	28,000
NFHR	Heritage Resources	75,000	67,000
	INVESTMENTS		
CNRF	Recreation Construction	-0-	145,000
CNTR	Trail Construction	222,000	107,000
	WILDLIFE AND FISH		
	OPERATIONS		
NFWL	Wildlife	197,000	138,000
NFIF	Inland Fish	62,000	50,000
NFTE	Threatened, Endangered and Sensitive Species	28,000	48,000
	RANGE		
	OPERATIONS		
NFRG	Livestock Grazing Management	317,000	457,000
NFRV	Noxious Weeds	247,000	276,000
RBRB	Range Betterment	52,000	68,000
	TIMBER		
	OPERATIONS		
NFTM	Timber Management	4,933,000	5,109,000
NFFV	Forest Land Vegetation Management	467,000	140,000

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		FY98	FY99
FUND CODE	FUND	DOLLARS	DOLLARS
	INVESTMENTS		
CNTM	Timber Road Construction/Reconstruction	655,000	(See CNRD)
	SALVAGE		
SSSS	Timber Salvage	349,000	950,000
	WATER, SOIL, AND AIR		
	OPERATIONS		
NFSO	Watersheds	76,000	68,000
NFSI	Soil Improvement	132,000	154,000
TRTR	Ten Percent Road and Trail Fund	458,000	1,010,000
	MINERALS		
	OPERATIONS		
NFMG	Minerals	206,000	192,000
	INFRASTRUCTURE		
	OPERATIONS		
NFFA	Facilities Maintenance	239,000	189,000
QMQM	Quarters Maintenance	32,000	61,000
NFRD	Roads Maintenance	843,000	(See CNRM)
CNRM	Roads Maintenance	*	902,000
HTER	Flood Repair	66,000	1,000
HWHW	Hazardous Waste Management (Nemo)	380,000	*
NFRN	Facilities Maintenance - REC	*	240,000
NFTR	Trail Maintenance	*	63,000
	INVESTMENTS		
CNFA	Facility Construction	-0-	10,000
CNGP	Road Construction	105,000	(See CNRD)

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		FY98	FY99
FUND CODE	FUND	DOLLARS	DOLLARS
CNRN	Road Construction	6,000	(See CNRD)
CNRD	Road Reconstruction/Construction	*	1,068,000
	REAL ESTATE, PLANNING, AND LAW ENFORCEMENT		
	OPERATIONS		
NFLP	Land Management Planning	240,000	115,000
NFIM	Inventory and Monitoring	70,000	254,000
NFLE	Law Enforcement	95,000	71,000
NFLA	Real Estate Management	322,000	312,000
NFLL	Landline Location	202,000	174,000
LALW	Land Acquisition, Land and Water	32,000	16,000
SPEP	Economic Action Program (Community Assistance)	34,000	30,000
	GENERAL ADMINISTRATION		
	OPERATIONS		
NFGA	General Administration	1,287,000	1,498,000
	TRUST FUNDS		
CWKV	Knutson-Vandenberg	3,320,000	2,591,000
RTRT	Reforestation	164,000	109,000
CWFS	Other Coop Work	603,000	432,000
NFNF	NFS-Protection and Management	211,000	408,000
HTAE	Federal Highway Administration Expense	7,000	13,000
NWBM1	Water System Improvements	*	82,000
PEPE	Timber Roads Purchaser Elective	*	371,000
SPFH	Forest Health Management, Federal Land	26,000	133,000
NFSD NFSA	Senior Community Service Employment Program	41,000	136,000

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		FY98	FY99
FUND CODE	FUND	DOLLARS	DOLLARS
	FIRE MANAGEMENT		
BDBD	Brush Disposal	170,000	228,000
WFPR	Fire Pre-suppression	1,676,000	2,174,000
WFHF	Hazardous Fuel Reduction	362,000	451,000
WFSU	Emergency Suppression and Rehabilitation	812,000	941,000
	TOTAL	\$20,735,000	\$22,664,000

*New or discontinued fund codes

Receipts:

Gross receipts before payments to counties:

	FY1998	FY1999
DESCRIPTION	DOLLARS	DOLLARS
Timber	16,680,806	15,064,311
Grazing	117,983	117,186
Recreation - Special Uses (recreation residences)	74,499	80,198
Recreation - User Fees (admissions, outfitter guide permits)	31,213	15,546
Utility Special Use Permits	73,400	39,493
Minerals	7,294	6,304
Special Uses other than Recreation, Utilities, and Minerals	40,587	55,581
TOTAL	\$17,025,782	\$15,378,619

Update Of Research Needs

The following research needs were identified in FY1999:

1. Wildlife habitat relationships model (HABCAP) validation:

- Brown Creeper
- Black-Backed Woodpecker
- Three-Toed Woodpecker
- Pygmy Nuthatch

2. Wildlife distribution and abundance

- Regal Fritillary

3. Northern Goshawk population dynamics

Appendix

- Public Monitoring Trips
- Goal and Objective Implementation
- Standard Compliance

Public Monitoring Trips FY1999

The public monitoring trips begun in fiscal year 1998 were continued in 1999. As part of implementing the 1997 Revised Forest Plan, the public was invited to observe and participate in monitoring efforts. The program was initiated to involve the public in monitoring the Forest resources and activities.

The new monitoring program established days throughout the summer and fall months when the public could help the Forest employees' complete specific monitoring activities. The scheduled trips were well attended. The attendance averaged approximately 15-25 participants each trip. We also had representation from county, state and other federal agencies on most trips.

Most of those attending were made aware of the trips from the initial notice mailed to the Forest Plan Mailing List. Several came because they had seen news releases inviting them, and a few came because others invited them.

We plan to continue the program in 2000. The trip schedule is included below. Please contact Peggy Woodward at 605-673-2251 (email- pwoodward@fs.fed.us) for further information or check our web site, www.fs.fed.us/r2/blackhills.

1999 Schedule:

DATE	MONITORING ITEM	RANGER DISTRICT
May 28	Watershed Conditions	Bearlodge District
June 18	Dead/Down Woody Material	Pactola/Harney District
June 25	Prescribed Fire Benefits	Custer/Elk Mountain District
July 9	Grazing Allotment Review	Spearfish/Nemo District
July 30	Noxious Weeds	Custer/Elk Mountain District
August 13	Timber Sale Review	Pactola/Harney District
August 27	Mountain. Pine Beetle Spread	Spearfish/Nemo District
September 10	Old Growth Conditions	Bearlodge District

2000 Schedule:

DATE	MONITORING ITEM	RANGER DISTRICT
August 18	Travel Management	Hell Canyon District ¹
August 28	Prescribed Fire Benefits	Bearlodge District
September 12	Snag Replacement	Hell Canyon District ¹
September 16	Scenery Management	Mystic District ²

¹ Formerly Custer/Elk Mountain District

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² Formerly Pactola/Harney District

IMPLEMENTATION OF GOALS AND OBJECTIVES

This section of the report describes progress in FY1999 towards meeting the goals and objectives in the 1997 Revised Forest Plan. Included objectives are those that correlate with the Monitoring Items in this report.

The Revised Forest Plan was approved in June 1997. Several groups subsequently appealed it in three separate appeals. There were 27 appeal points identified and reviewed by the Washington Office (WO). In an October 12, 1999 decision, the WO affirmed the Forest Plan on all but 2 of the 27 appeal points, with further instructions concerning the issues of species viability and diversity. The instructions include Interim Direction that the Forest will follow until the appropriate analysis and adjustments have been made to the Forest Plan.

This direction includes:

- Making sure surveys of sensitive species and management indicator species are done prior to all projects.
- Making sure monitoring of sensitive species and management indicator species is being done after project completion.
- Making sure that all such monitoring is detailed and quantitative (class A) rather than simply observed in a qualitative way (class B.) Include an aquatic management indicator species.
- Making sure that effects analyses for projects include all sensitive species and management indicator species. Disclose the effectiveness of standards and mitigation measures in protecting the species.
- Treat all environmentally protective guidelines in the Plan as standards. More specific direction pertained to goshawks, snags, American Marten, and livestock grazing effects.

The Forest withdrew seven decisions signed in September pending determination of the need for further analysis in light of the WO appeal decision.

Therefore the "Planned" section reflects only one project for the fiscal year 1999. Those decisions that were withdrawn will be included when they are reissued.

Planned - The **Planned** designation represents activities planned in FY1999. These activities will not be implemented for several years. They do not relate to **Accomplished**.

Accomplished - The **Accomplished** designation represents activities planned under earlier project decisions and actually carried out in FY1999. These projects were planned under the 1983 Forest Plan and may not contribute toward the 1997 Revised Forest Plan Goals and Objectives. We include them for information.

Current Conditions - Acres of habitat reported in the RMRIS Database as of February 14, 2000.

GOALS AND OBJECTIVES

GOAL 1: Protect basic soil, air, water and cave resources.

Objectives:

101. Maintain air quality standards in accordance with state implementation plans.

The Forest received no violations of the Clean Air Act on the BHNF in FY1999.

GOAL 2: Provide for a variety of life through management of biologically diverse ecosystems.

Objectives:

201. During the planning period conserve existing hardwood communities and restore historic hardwood communities by 10 percent over 1995 conditions on sites capable of supporting these communities.

Planned - Approximately 480 acres will be treated to conserve and restore hardwood communities.

Accomplished – 1,650 acres restored and enhanced.

Current Condition (from RMRIS) – changes reflect both accomplishments and mapping corrections:

FY	1995 RMRIS Acres	1998 RMRIS Acres	1999 RMRIS Acres
Hardwoods	59,734	59,661	63,286

205. Restore grassland (meadow and prairie) communities across the Forest by 10 percent over 1995 conditions. Determine the restoration potential on a site-specific basis based on landform and soils.

Planned - Project treatment may increase grasslands by approximately 160 acres.

Accomplished – 45 acres restored.

Accomplished – 920 acres enhanced by removing encroaching pine.

Current Condition (from RMRIS) – changes reflect both accomplishments and mapping corrections:

FY	1995 RMRIS Acres	1998 RMRIS Acres	1999 RMRIS Acres
Grasslands	101,861	104,341	105,540

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209. Manage at least 5 percent of a timber harvest project area for the grass/forbs structural stage. Grass/forbs openings should be 1 acre in size or larger. In accounting for openings, include those created by wildfire or other natural disturbance events. Also include grass/forbs openings greater than 1 acre within low-density stands.

Planned - treatment is planned on approximately 458 acres within a project treatment area of approximately 4,115 acres.

Accomplished – 245 acres of patch-cuts.

FY	1995 RMRIS Acres	1998 RMRIS Acres	1999 RMRIS Acres
Patch-cuts	231	729	974

211. In conifer forested portions of a planning unit (diversity unit, watershed, or land-type association), maintain an average of 1.08 hard snags per acre, well dispersed across the conifer-forested portion of the planning area through the rotation. Calculate as a per acre average for the planning unit; some acres may have no snags while others may exceed the average.

Planned - the following table lists snag density at decision signing. Where density is below the standard, mitigation measures should serve to increase the density at project implementation:

PROJECT AREA	HARD SNAG DENSITY (SNAGS PER ACRE)
Roubaix	.85

221. Conserve or enhance habitat for sensitive species and species of special interest (management indicator species) listed in Chapter Two.

Planned - Currently involved in a cooperative elk study with the objective to validate the habitat relationship model.

A Forest-wide survey of land snails that was done in 1999 assesses a previous survey and adds new areas to determine trends in size and vigor. The final report is expected in 2000.

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223. Use management ignited fires and prescribed natural fires to achieve desirable vegetative diversity and fuel profiles on 8,000 acres per year for the next decade. Use natural fire on a limited basis under specifically prescribed conditions.

Planned - Approximately 546 acres will be treated through prescribed burning.

Accomplished – 1,830 acres treated through prescribed burning.

227. Manage 28,900 acres of activity fuels and 4,000 acres of natural fuels each year during the next decade, consistent with the need to protect life, property and natural resources from the threat of wildfire. This acreage includes acres specified in Objective 223.

Accomplished: Fuel treatment activities on 28,029 acres.

229. Using analyses of insect and disease populations, determine where suppression strategies are needed to meet management objectives and minimize value loss of tree vegetation affected by outbreaks of insect and disease pests.

The Veteran/Boulder project was for suppression of the mountain pine beetle; however, a lawsuit has prevented implementation. See Monitoring Item 20c for analysis information.

GOAL 3: Provide for sustained commodity uses in an environmentally acceptable manner.

Objectives:

301. Produce on a sustained basis and make available up to 233 million pounds of forage for livestock and wildlife use each year (weather permitting). The location and amount of forage produced under the forest canopy will vary with the density of the overstory. This may necessitate changes in where and how both livestock and wildlife grazing takes place on a local basis over the rotation of a stand of timber.

a. Livestock use will be up to 127 million pounds of forage per year or approximately 128,000 AUMs.

1999 calendar year - permitted AUMs were 119,570 AUMs and authorized (actually grazed) were 118,565 AUMs.

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303. Offer the following allowable sale quantity (ASQ) of timber on suitable and available timberlands in the next decade:

1997 REVISED FOREST PLAN ALLOWABLE SALE QUANTITY FROM SUITABLE LANDS: (DECADE TOTAL)		<u>ANNUAL AVERAGE</u>	
		MILLION CUBIC FEET (MMCF)	HUNDRED CUBIC FEET (ccf)
SAWTIMBER			
Million Cubic Feet	181	18.1	181,000
(Million) Board Feet	838		
ROUNDWOOD			
Million Cubic Feet	21	2.1	21,000
(Million) Board Feet	N/A		
TOTAL			
Million Cubic Feet	202	20.2	202,000
(Million) Board Feet	838		

	PLANNED FY1998	OFFERED FY1998	SOLD FY1998	HARVESTED FY1998
SAWTIMBER				
Hundred Cubic Feet	207,000*	148,138**	161,880	140,759
Million Board Feet				
ROUNDWOOD				
Hundred Cubic Feet				
Million Board Feet				
TOTAL				
Hundred Cubic Feet	207,000*	148,138**	161,880	140,759
Million Board Feet				

	PLANNED FY1999	OFFERED FY1999	SOLD FY1999	HARVESTED FY1999
SAWTIMBER				
Hundred Cubic Feet	20,200*	160,756**	144,100	138,687
Million Board Feet				
ROUNDWOOD				
Hundred Cubic Feet	2,020*		856	1,316
Million Board Feet				
TOTAL				
Hundred Cubic Feet	22,220*	160,756*	144,956	140,003
Million Board Feet				

Note: Management direction was to accelerate project decisions to have a choice of available timber sale offerings.

**Planned - estimated volume from signed NEPA project decisions. See page 53 for lower volume explanation.*

***Offered - regular program volume and salvage sale volume.*

309. Provide the following changes to the Forest Development Road system (FDR) in support of long-term sustainable production of commodities.

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	1997 Revised Forest Plan	<i>Planned FY1998</i>	<i>Accomplished FY1998</i>	<i>Planned FY1999</i>	<i>Accomplished FY1999</i>
Road Construction	280 miles/decade	<i>35 miles</i>	<i>13.3 miles</i>	<i>5.4 miles</i>	<i>21.2 miles</i>
Road Reconstruction	870 miles/decade	<i>301 miles</i>	<i>102.0 miles</i>	<i>38.6 miles</i>	<i>178.1 miles</i>
Road Obliteration	140 miles/decade	<i>*</i>	<i>-</i>	<i>*</i>	<i>27.3 miles</i>
Two-track Obliteration	270 miles/decade	<i>*</i>	<i>24.8 miles</i>	<i>*</i>	<i>45.9 miles</i>

****Road and/or two-track obliteration - 84.6 – FY1998; 21.9 – FY1999.***

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GOAL 4:

Provide for scenic quality, a range of recreational opportunities, and protection of heritage resources in response to the needs of the Black Hills National Forest visitors and local communities.

Objectives:

403. Improve the management of heritage resources and integrate them with recreation and education while providing for compliance with all applicable laws and regulations.

- a. Increase numbers and types of heritage resource interpretive sites and opportunities. Provide five projects per year during the plan period.

Accomplished - Heritage Sites Interpreted - 25 sites.

- c. Nominate eligible sites (approximately five per year in the plan period) to the national Register of Historic places.

No sites were nominated in FY1999.

- d. Inventory 50,000 acres each year in the plan period for heritage resource sites.

Accomplished - Heritage Inventory – 78,938 acres

407. Provide the following Recreation Opportunity Spectrum (ROS):

RECREATION OPPORTUNITY SPECTRUM (ROS)	
(Thousands of Acres)	
Primitive	11
Semi-Primitive Non-Motorized	18
Semi-Primitive Motorized	12
Roaded Natural	1107
Roaded Natural Non-Motorized	95
Rural	1

There were no changes to ROS in FY1999.

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408. Manage recreation use to stay within the capacity for the ROS class:

ROS CLASS	CAPACITY RANGE RECREATION VISITOR DAYS (RVDs/ACRE)		
	Low	Moderate	High
Primitive	0.25	0.5	0.75
Semi-Primitive Non-Motorized	1.00	2.0	3.00
Semi-Primitive Motorized	1.50	3.0	4.50
Roaded Natural Non-Motorized	1.50	3.0	4.50
Roaded Natural	3.00	6.0	9.00
Rural	<<<< Design Capacity >>>>		

(See glossary for ROS capacity classes)

There were no changes to ROS in FY1999.

411. Correct or minimize potential risks to human lives or property in developed recreation sites. As annual inspections are done, schedule maintenance activities to correct or minimize identified problems.

Accomplished: An analysis was made of hazardous trees in developed recreation sites and corrections were made.

416. Maintain and construct trails as displayed in the following table:

1997 REVISED FOREST PLAN		FY1998 ACCOMPLISHED	FY1999 ACCOMPLISHED
Non-motorized Trails (1996)	293 miles	411.1³	296.0³
Motorized Trails (1996)	14 miles	24.6³	24.6³
Non-motorized Trail Construction	204 miles ¹	0.00	0.00
Motorized Trail Construction or Conversion from Road to Motorized Trail	15 miles ¹	0.00	0.00
Total Forest Trail System	526 miles ²	435.7³	320.6³
Reconstruction	100 miles ¹	70.10	2.70

¹Per decade

²Total Miles at End of Decade

³ Inventoried miles at end of FY1998 and FY1999. FY1999 reflects Mickelson Trail operation and maintenance being transferred to the State of South Dakota.

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GOAL 5:

In cooperation with other landowners, strive for improved landownership and access that benefit both public and private landowners.

Objectives:

501. Conduct approximately 500 to 1000 acres of land exchange each year over the decade, such as through purchase, exchange or donation, whenever lands meet land-adjustment criteria in Guidelines 8101 through 8104.

	FY1998	FY1999
LAND ADJUSTMENT COMPLETED	ACRES	ACRES
<i>Land Acquired through Exchange</i>	414	479
<i>Land Acquired through Donation</i>	105	-0-
TOTAL ACQUIRED	519	479
LESS:		
<i>Land Conveyed Out</i>	255	498
NET CHANGE:	+264	-19

LAND ADJUSTMENT BEING PROCESSED	ACRES	ACRES
<i>Land Acquiring through Exchange</i>	479	894
<i>Land Acquiring through Donation</i>	0	-0-
TOTAL ACQUIRING	479	894
LESS:		
<i>Land Conveying Out</i>	498	723
NET CHANGE:	-21	+171

503. Acquire approximately 25 rights-of-way each year to improve Forest access.

RIGHTS OF WAY	FY1998	FY1999
ACQUIRED	6	8

GOAL 6:

Improve financial efficiency for all programs and projects.

Objectives:

602. Maintain the ability to respond to budget reductions by keeping overhead and fixed costs, including salaries, at less than 70 percent of the Forest budget.

	FY1998	FY1999
PERCENTAGE	74	67

Standard Compliance

Except for the following, all standards/guidelines were incorporated into project decisions in FY1999.

The following Guidelines are acknowledged in several decision documents as not being met. We are considering a Forest Plan amendment on this guideline that will involve changes to the HABCAP program. Until this is decided, we are maintaining the habitat effectiveness values and not allowing projects to decrease these values.

5.1-3201. Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness.

Elk Summer = 50 percent

Elk Winter = 45 percent

Deer Summer = 50 percent

Deer Winter = 45 percent

GUIDELINE